

Recovery Plan Action Status

Plan Name: Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills

Plan Status: Final

Plan Date: 30-Aug-02

Lead Agency: USFWS

Lead Office: Sacramento Fish And Wildlife Office

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Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	2	1.1	Establish cooperative programs with participants from the public and private sector.	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Contract, Internal Administrative, Internal Technical Assistance	Cost depends on interest and availability of partners.
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	1	1.2.1	Develop and implement outreach plans.	Ongoing Not Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service	Other: Information and Education	Contract, Internal Administrative, Internal Technical Assistance	Total costs depend on scope of future outreach needs. In 2000 a \$55,900 section 6 grant to CDFG was used to fund outreach & education.
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	2	1.2.2	Develop and implement economic and other incentives.	Not Started			El Dorado County, California, Nevada County, California, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Other	Contract, Internal Administrative, Internal Technical Assistance	Cost depends on scope and nature of incentives

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Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	1	2.1.3	Protect and secure Pine Hill preserve for multiple species.	Partially Complete	Prior to FY 1995		El Dorado County, California, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Forestry and Fire Protection, Private landowners	Acquisition: Fee Title	Contract	About 154 hectares (380 acres) in public ownership. Cost estimate is for securing and protecting approximately 241 hectares (595 acres)
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi)	1	2.1.5	Protect and secure Salmon Falls/Martel Creek preserve for multiple species (Northern portion).	Partially Complete	Prior to FY 1995		El Dorado County, California, El Dorado Irrigation District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Federal Energy Regulatory Commission, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Fee Title	Contract, Internal Technical Assistance	About 488 hectares (1,205 acres) in public ownership. Cost is estimate to secure and protect an additional approximate 271 hectares (669 acres)

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El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>)	1	2.2.1	Protect and secure specialty preserve for <i>Galium californicum</i> ssp. <i>sierrae</i>	Not Started			El Dorado County, California, El Dorado Irrigation District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Federal Energy Regulatory Commission, U.S. Fish and Wildlife Service, California Department of Fish and Game, Private landowners	Acquisition: Easement, Acquisition: Fee Title	Contract, Internal Technical Assistance	Cost is to secure and protect approximately 24 hectares (60 acres) in southern part of Pine Hill formation.
Layne's butterweed (<i>Senecio layneae</i>), Pine Hill ceanothus (<i>Ceanothus roderickii</i>), El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>), Stebbins' morning-glory (<i>Calystegia stebbinsii</i>), Pine Hill flannelbush (<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>)	1	3.1	Establish a funding mechanism for long-term maintenance and management of the Pine Hill formation preserves in perpetuity.	Ongoing Not Current	FY 2000 - FY 2004		American River Conservancy, El Dorado County, California, El Dorado Irrigation District, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Forestry and Fire Protection	Management: Other	Contract, Internal Technical Assistance	Federal and state partners will assist in 30 percent of management costs. Costs will depend on management. The needed, frequency of fire, details of management plan in Task 3.3. The intention is to have an endowment set up to fund the preserve manager
Layne's butterweed (<i>Senecio layneae</i>), Pine Hill ceanothus (<i>Ceanothus roderickii</i>), El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>), Stebbins' morning-glory (<i>Calystegia stebbinsii</i>), Pine Hill flannelbush (<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>)	1	3.2	Hire preserve manager for the Pine Hill formation	Complete	FY 2000 - FY 2004	FY 2006	El Dorado County, California, U.S. Fish and Wildlife Service	Management: Other	Contract, Internal Technical Assistance	

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Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	1	3.4.2	Establish monitoring techniques and protocol for habitat monitoring.	Ongoing Current	FY 2008		El Dorado County, California, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Eldorado National Forest, California Department of Fish and Game	Research: Other Information	Internal Field Assistance, Internal Technical Assistance	
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	1	3.5	Perform baseline monitoring at all areas identified for preservation.	Ongoing Current	FY 2006		El Dorado County, California, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Eldorado National Forest, California Department of Fish and Game	Research: Population Surveys	Internal Field Assistance, Internal Technical Assistance, Volunteer	Baseline monitoring will be done during the closest appropriate field season to acquisition of habitat/conservation easement, but it may take 10 years to acquire the habitat. Costs depend on which lands are acquired and need monitoring.

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Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	2	4.1	Establish a survey program and protocols for all species covered in the recovery plan.	Ongoing Current	FY 2006		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, Eldorado National Forest, California Department of Fish and Game	Research: Other Information, Research: Population Surveys	Internal Field Assistance, Internal Technical Assistance	
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsi), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	2	4.2.1	Conduct general surveys	Ongoing Current	FY 2005		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	These surveys will be conducted as preserves are acquired. Habitat acquisition may take 10 or more years for some sites; costs depend on timing and area acquired. Included in implementation of task 3.6
El Dorado bedstraw (Galium californicum ssp. sierrae)	1	4.2.2.1	Conduct surveys for Galium californicum ssp. sierrae in Cameron Park area.	Ongoing Current	FY 2005		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Internal Field Assistance	

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El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>)	1	4.2.2.2	Conduct surveys for <i>Galium californicum</i> ssp. <i>sierrae</i> northwest of Salmon Falls.	Not Started			El Dorado County, California, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Internal Field Assistance	Lead party dependent on land ownership in area
El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>)	2	4.2.2.3	Survey potential habitat at Martel Creek for <i>Galium californicum</i> ssp. <i>sierrae</i> .	Ongoing Current	FY 2006		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Habitat Status, Research: Population Surveys	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	
Pine Hill ceanothus (<i>Ceanothus roderickii</i>), El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>), Stebbins' morning-glory (<i>Calystegia stebbinsii</i>), Pine Hill flannelbush (<i>Fremontodendron californicum</i> ssp. <i>decumbens</i>)	2	5.1	Throughout the species' range: Develop plant propagation techniques for listed species and species of concern for which repatriation or introductions would be appropriate.	Partially Complete	FY 2007		Rancho Santa Ana Botanic Garden, El Dorado County, California, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Propagation	Internal Field Assistance, Internal Technical Assistance	Currently not thought to be appropriate for <i>Wyethia reticulata</i> or <i>Senecio layneae</i>
Layne's butterweed (<i>Senecio layneae</i>), Pine Hill ceanothus (<i>Ceanothus roderickii</i>), El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>)	1	5.6	Conduct necessary demographic, reproductive, and fire research at the Pine Hill preserve.	Partially Complete	FY 2008		U.S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Forestry and Fire Protection	Research: General	Contract, Internal Field Assistance, Internal Technical Assistance, Species Expert	Demographics - <i>Galium californicum</i> ssp. <i>sierrae</i> , <i>Ceanothus roderickii</i> , <i>Senecio layneae</i> , <i>Wyethia reticulata</i> Reproduction - <i>Galium californicum</i> ssp. <i>sierrae</i> Fire and disturbance - <i>Senecio layneae</i>
Layne's butterweed (<i>Senecio layneae</i>), Pine Hill ceanothus (<i>Ceanothus roderickii</i>), El Dorado bedstraw (<i>Galium californicum</i> ssp. <i>sierrae</i>), Stebbins' morning-glory (<i>Calystegia stebbinsii</i>)	1	5.8	Conduct necessary studies at the Salmon Falls preserve.	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Competition, Research: Demographic Studies, Research: General	Contract, Graduate Student, Internal Field Assistance, Internal Technical Assistance, Species Expert	Demographics - <i>Calystegia stebbinsii</i> , <i>Galium californicum</i> ssp. <i>sierrae</i> , <i>Ceanothus roderickii</i> , <i>Senecio layneae</i> , <i>Wyethia reticulata</i> Reproduction - <i>Galium californicum</i> ssp. <i>sierrae</i> Fire and disturbance - <i>Senecio layneae</i>

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El Dorado bedstraw (Galium californicum ssp. sierrae), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	1	6.1.1	Collect and store viable seed for Fremontodendron californicum ssp. decumbens and Galium californicum ssp. sierrae	Ongoing Not Current	FY 2000 - FY 2004		Rancho Santa Ana Botanic Garden, University of California at Berkeley, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Other Information, Research: Propagation, Research: Reintroduction	Contract, Internal Field Assistance, Internal Technical Assistance	Contract has been transferred to BOR, Central Valley Project Conservation Program.
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsii), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	2	6.2	Initiate enhancement, repatriation, or introductions where appropriate.	Ongoing Current	FY 2008		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Other, Management: Reintroduction	Internal Field Assistance	Costs dependent on determined need for action. Lead party will depend on local land ownership.
El Dorado bedstraw (Galium californicum ssp. sierrae)	1	7	Determine possible prescribed burning management strategies.	Planned	FY 2009		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Forestry and Fire Protection	Management: Habitat Maintenance and Manipulation	Contract, Internal Administrative, Internal Technical Assistance	Strategoes have not been peer reviewed.
Layne's butterweed (Senecio layneae), Pine Hill ceanothus (Ceanothus roderickii), El Dorado bedstraw (Galium californicum ssp. sierrae), Stebbins' morning-glory (Calystegia stebbinsii), Pine Hill flannelbush (Fremontodendron californicum ssp. decumbens)	2	8	Perform metapopulation-type analysis.	Not Started			U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service	Research: Genetics, Research: Migration, Research: Other Information	Contract, Internal Field Assistance	